

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C.**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Advanced Television Systems)
and Their Impact Upon the)
Existing Television Broadcast)
Service)

MM Docket No. 87-268

TO: The Commission

COMMENTS OF BRUNSON COMMUNICATIONS, INC.

Brunson Communications, Inc. ("Brunson"), by its counsel, submits these comments in response to the *ex parte* submission of the Association for Maximum Service Television, Inc. ("MSTV") dated November 20, 1997. Brunson is the operator of television broadcast station WGTW, Channel 48, Burlington, New Jersey.

The MSTV submission demonstrates that the DTV channel allotment scheme set forth in the Sixth Report and Order in this proceeding (FCC 97-115, released April 21, 1997) represents less than the optimum solution for the rollout of digital television service during the transition period. Based on new data, MSTV has shown that certain of the premises on which the original DTV plan were based are unsound. Of particular concern in this regard are the data reported in the MSTV

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submission with respect to adjacent channel interference. It is far preferable to remedy the defects in that allotment plan now rather than to wait to attempt a solution after broadcasters begin operation on the new channels, only to be flooded with interference complaints.

Since the transition to DTV will last a number of years, it is important to ensure that service to the public is only minimally impaired by interference during that time. The whole purpose of the shift to digital television broadcasting is to provide the public with a superior picture and superior sound. Therefore, it would be unwise to rush to implement an allotment scheme under which millions of people would find their DTV reception no better than the NTSC signals they currently receive. Just as significant would be the innumerable instances where existing NTSC signals would be degraded by interference from DTV transmissions.

Accordingly, concerns that the MSTV submission comes at a late stage of this proceeding should not cause the Commission to reject the improvements suggested by MSTV. The public interest will be served if the Commission accepts the constructive comments of MSTV in order to fashion a final DTV allotment table that will do justice to the substantive objective of this proceeding.

A fool has been defined as one who, when informed that he is headed in the wrong direction, redoubles his speed. For the Commission to set in concrete too

quickly the imperfect allotments made in the Sixth Report and Order would lead only to the crumbling of that concrete a few years hence under the weight of bad experience. In contrast, the Commission has chosen the more responsible path of accepting the MSTV submission and inviting public comment on it. It should take the further step of adopting the MSTV plan.

Brunson's own situation is illustrative of the merits of the MSTV proposal. Brunson initially took the data in the allotment table attached to the Sixth Report and Order at face value, and assumed that its proposed DTV allotment of Channel 27 would enable it to provide adequate digital service to substantially all of the viewers who currently receive the station's NTSC signal. At first glance, the channel allotment proposed for WGTW by MSTV -- Channel 46 -- did not appear to offer any improvement at all.

Nevertheless, when both proposals were subjected to more exacting engineering analysis, applying the same standards to each plan, it became apparent that the MSTV submission represents a substantial improvement over the level of service possible based on the use of DTV Channel 27.

Most significantly, as demonstrated by the attached technical exhibit, DTV operation on Channel 27 by WGTW would suffer severe interference from the co-channel NTSC operation of station WHTM-TV, Harrisburg, Pennsylvania. As set

forth in the technical exhibit attached hereto, the licensed NTSC operation of WHTM-TV is short-spaced to WGTW-TV's transmitter site by almost 70 km. Not only would the DTV operation of WGTW-TV be severely impaired in heavily populated areas, but numerous viewers of WHTM-TV would also lose existing service.

Further, the DTV transmitter of station KYW-TV, operating on Channel 26 (a first adjacent channel to the WGTW allotment) will be located in the same antenna farm from which WGTW broadcasts. The potential for harmful interference between first adjacent channel DTV operations that are too close together is too great to leave these proposed allotments in place.¹

The MSTV submission suggested allotment of Channel 46 to WGTW. This would clearly be preferable. The potential for interference with the signal of WGTW would be very significantly lessened if WGTW were allotted Channel 46.

CONCLUSION

As noted above, if the Commission makes the DTV Table of Allotments in the form proposed in its Sixth Report and Order final, WGTW will suffer harmful


¹Advanced Television Technology Center testing cited in Comment On and Opposition to Petitions for Reconsideration of the Fifth and Sixth Reports and Orders Submitted by the Association for Maximum Service Television, Inc. And the Broadcasters Caucus, MM Docket No. 87-268 (July 18, 1997) at 29-30.

interference from co-channel WHTM-TV at Harrisburg, Pennsylvania, to which WGTW-TV is short-spaced by no less than 68.7 km. The threat of DTV to DTV interference from first adjacent channel KYW-TV is also a grave problem.

For the preceding reasons, Brunson urges the Commission to adopt the changes to the DTV Table of Allotments submitted by MSTV on November 20, 1997.

Respectfully submitted,

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Dated: December 17, 1997

TECHNICAL EXHIBIT
PREPARED ON BEHALF OF
TV STATION WGTW
BURLINGTON, NEW JERSEY
IN MM DOCKET NO. 87-268

This Technical Statement was prepared on behalf of television station WGTW at Burlington, New Jersey to provide a comparison of the FCC's DTV allotment for WGTW contained in 6th Report and Order in MM Docket No. 87-268 (Docket No. 87-268) and the DTV allotment proposed by MSTV in a recently filed *ex parte* submission. As demonstrated below, the channel proposed by MSTV for WGTW(TV)'s DTV operation (46) is preferred from an interference standpoint.

Station WGTW currently operates on NTSC channel 48 at Burlington with a non-directional antenna ERP of 2340 kW and an antenna height above average terrain (HAAT) of 335 meters. In MM Docket No. 87-268, the FCC proposed channel 27 for WGTW's DTV allotment with an ERP of 50 kW and an HAAT 335 meters. The FCC indicated a 98.5% DTV/NTSC coverage match. MSTV has proposed channel 46 for WGTW(TV)'s DTV operation with an ERP of 60.7 kW and an HAAT of 339 meters. The MSTV indicated a 99.7% DTV/NTSC coverage match. The "minor" difference in FCC and MSTV HAAT values are due to the calculation method used.

Figure 1 is a map which depicts the Grade B contour for WGTW(TV)'s NTSC operation on channel 48 (solid line), the DTV noise-limited Grade B contour based on the FCC's proposed DTV operation on channel 27 (long-dashed line) and the noise-limited contour based on MSTV's proposed DTV operation on channel 46 (short-dashed line). As can be seen, the NTSC and MSTV contours are coextensive

and the FCC contour is located slightly outside the NTSC/MSTV contours.

Figure 2 is a separation study for the FCC's DTV channel 27 operation from the WGTW(TV) transmitter site. The study shows the separations applicable to other NTSC stations (DTV to NTSC) and to the DTV allotments (DTV to DTV0 adopted by the FCC in the 6th Report and Order. Although the DTV separations were adopted by the FCC for "new" DTV allotments, they can also be utilized to determine which stations have the greatest potential for interference. As shown, the most significant short-spacing to other NTSC stations is with co-channel WHTM-TV on channel 27 at Harrisburg, PA (see Sheet 1). The short-spacing is 68.7 km and this indicates a potential for mutual interference. There are no short-spacings indicated towards other DTV stations (see Sheet 3); however, the first adjacent channel 26 DTV allotment for KYW-TV (NTSC Ch. 3, Philadelphia) is going to be located in the same antenna farm. It has recently been determined that there is a potential for mutual interference between first adjacent DTV operations that are assigned too close together. This is based on laboratory testing which was unavailable until late this summer.

Figure 3 is a separation study for the MSTV's proposed DTV channel 46 operation from the WGTW(TV) transmitter site. The separation study is based on MSTV's proposed DTV table. The only NTSC short-spacings are towards are toward non-adjacent channel stations where the potential for interference is minimal. Furthermore, there is ample clearance towards any other DTV allotments.

Based on the above, it appears that the DTV allotment proposed by MSTV for WGTW (Channel 46) is preferable to the FCC's proposal (Channel 27) as there

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Page 3

Burlington, New Jersey

would be less potential for interference caused and received and, furthermore, channel 46 is located within the true "core" band (channels 7-46).

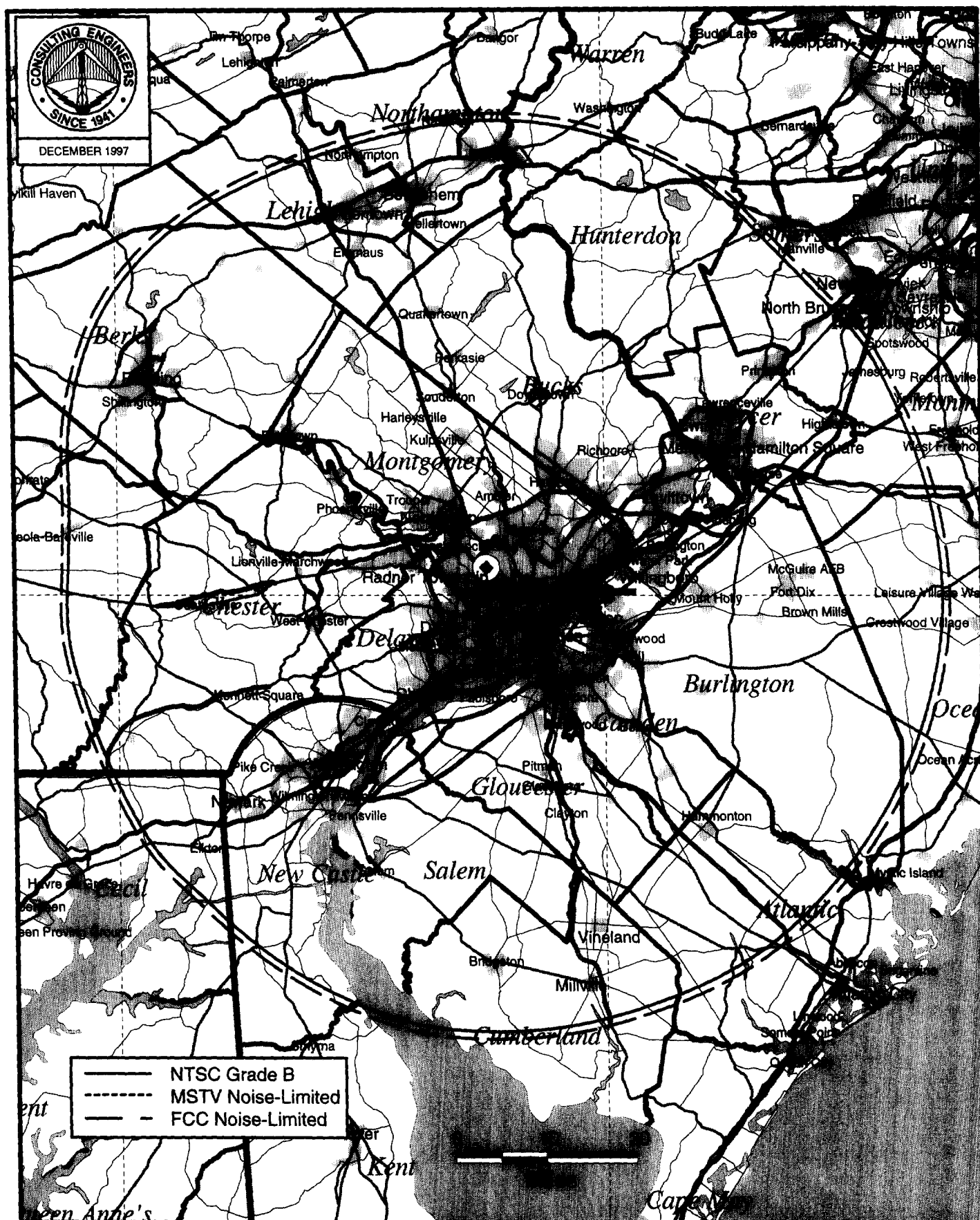
W. Jeffrey Reynolds

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December 16, 1997

Figure 1



NOISE LIMITED / GRADE B CONTOURS

WGTW(TV)

BURLINGTON, NJ

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

DTV to NTSC Separation Study - FCC Allotment Table

Job Title :WGTW
Zone : 2
Channel 27 (548-554 MHz)

Separation Buffer 32 km
FCC TV DB Date : 12/05/97
Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
LMRS	PHILADELPHIA PA	-	19(o)	0	39-56-58 75-09-21	144.7	12.79 0.00	0.0 LMRS
LAND MOBILE CHANNEL ONLY								
LMRS	NEW YORK NY	-	19(o)	0	40-45-06 73-59-39	52.9	131.99 0.00	0.0 LMRS
PROPOSED LAND MOBILE CHANNEL, DOCKET 85-172								
LMRS	PHILADELPHIA PA	-	20(o)	0	39-56-58 75-09-21	144.7	12.79 0.00	0.0 LMRS
LAND MOBILE CHANNEL ONLY								
WNJS LIC	CAMDEN NJ	*23(+) 2340 BLET-860630KO	I	271	39-43-41 74-50-39	135.8	48.86 -24.76	24.1/80.5 SHORT
WNYETV LIC	NEW YORK NY	*25(o) 2450 DA BLET-920220KG	I	395	40-44-54 73-59-10	53.2	132.32 51.82	24.1/80.5 CLEAR
LMRS	PHILADELPHIA PA	-	26(o)	0	39-56-58 75-09-21	144.7	12.79 0.00	0.0 LMRS
PROPOSED LAND MOBILE CHANNEL, DOCKET 85-172								
LMRS	NEW YORK NY	-	27(o)	0	40-45-06 73-59-39	52.9	131.99 0.00	0.0 LMRS
PROPOSED LAND MOBILE CHANNEL, DOCKET 85-172								
WHTMTV LIC	HARRISBURG PA	27(-) 2400 BLCT-2267	I	341	40-18-57 76-57-02	282.3	148.60 -68.70	217.3 SHORT
WHTMTV CP	HARRISBURG PA	27(-) 2140 DA BPCT-950120KE	I	346	40-18-57 76-57-02	282.3	148.60 -68.70	217.3 SHORT
WTFX LIC	PHILADELPHIA PA	29(o) 5000 BLCT-2289	I	347	40-02-26 75-14-20	135.2	0.45 23.65	24.1/80.5 CLEAR
WPXNTV LIC	NEW YORK NY	31(-) 2820 DA BLCT-860703KH	I	475	40-42-43 74-00-49	54.1	128.09 47.59	24.1/80.5 CLEAR
COMMERCIAL CHANNEL OPERATING NONCOMMERCIALY								

DTV to NTSC Separation Study - FCC Allotment Table

Job Title :WGTW

Zone : 2

Channel 27 (548-554 MHz)

Separation Buffer 32 km

FCC TV DB Date : 12/05/97

Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
ALLOC.	DOVER DE	-	*34(o) I	0	39-09-28 75-31-24	193.8	101.24 20.74	24.1/80.5 CLEAR
LMRS	NEW YORK NY	-	34(o)	0	40-45-06 73-59-39	52.9	131.99 0.00	0.0 LMRS
PROPOSED LAND MOBILE CHANNEL, DOCKET 85-172								
WYBE LIC	PHILADELPHIA PA	BLET-900612KE	*35(-) I	1910 DA 284	40-02-26 75-14-20	135.2	0.45 23.65	24.1/80.5 CLEAR
WXTV LIC	PATERSON NJ	BLCT-920218KE	41(-) I	2340 DA 421	40-44-54 73-59-10	53.2	132.32 51.82	24.1/80.5 CLEAR
LMRS	PHILADELPHIA PA	-	42(o)	0	39-56-58 75-09-21	144.7	12.79 0.00	0.0 LMRS
PROPOSED LAND MOBILE DOCKET D85-172.								

** End of TV Separation Study for Channel 27 **

DTV to DTV Separation Study - FCC Allotment Table

Job Title :WGTW

Separation Buffer 32 km

Zone : 2

FCC DTV DB Date: 05/09/97

Channel 27 (548-554 MHz)

Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
DKYWTW	PHILADELPHIA		26	1000.0	40-02-39	60.8	0.19	32.2/88.5
DTVALT	PA		I	305	75-14-26		32.01	CLEAR
DWGTW	BURLINGTON		27	50.00	40-02-36	0.0	0.00	
DTVALT	NJ		I	335	75-14-33			
DWETATV	WASHINGTON		27c	64.30	38-57-49	233.7	200.08	196.3
DTVALT	DC		I	233	77-06-18		3.78	CLOSE
DWTBY	POUGHKEEPSIE		27	112.50	41-43-09	28.9	213.69	196.3
DTVALT	NY		I	490	73-59-47		17.39	CLEAR

** End of DTV Separation Study for Channel 27 **

DTV to NTSC Separation Study - MSTV Allotment Table

Job Title :WGTW
Zone : 2
Channel 46 (662-668 MHz)

Separation Buffer 32 km
FCC TV DB Date : 12/05/97
Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
WPXNTV	NEW YORK		31(-)	2820 DA	40-42-43	54.1	128.09	24.1/80.5
LIC	NY	BLCT-860703KH	I	475	74-00-49		47.59	CLEAR
COMMERCIAL CHANNEL OPERATING NONCOMMERCIALY								
	PHILADELPHIA		32(o)		39-56-58	144.7	12.79	0.0
LMRS	PA	-		0	75-09-21		0.00	LMRS
PROPOSED LAND MOBILE CHANNEL, DOCKET 85-172								
WLVTTV	ALLENTOWN		*39(o)	575	40-33-58	344.4	60.32	24.1/80.5
LIC	PA	BLET-429	I	302	75-26-06		-20.18	SHORT
	PHILADELPHIA		42(o)		39-56-58	144.7	12.79	0.0
LMRS	PA	-		0	75-09-21		0.00	LMRS
PROPOSED LAND MOBILE DOCKET D85-172.								
WPMT	YORK		43(o)	2140	40-01-38	269.5	115.89	24.1/80.5
LIC	PA	BLCT-840905KI	I	415	76-36-00		35.39	CLEAR
WVIATV	SCRANTON		*44(-)	1000	41-10-55	337.5	137.19	24.1/80.5
LIC	PA	BLET-830929KG	I	509	75-52-17		56.69	CLEAR
	PHILADELPHIA		46(o)		39-56-58	144.7	12.79	0.0
LMRS	PA	-		0	75-09-21		56.69	LMRS
PROPOSED LAND MOBILE DOCKET D85-172.								
WSKGTV	BINGHAMTON		*46(+)	603	42-03-22	345.5	231.19	217.3
LIC	NY	BLET-830315KJ	I	375	75-56-39		13.89	CLOSE
WNJU	LINDEN		47(+)	4570 DA	40-42-43	54.1	128.09	9.7/88.5
LIC	NJ	BLCT-800423KE	I	460	74-00-49		39.59	CLEAR
WGTW	BURLINGTON		48(-)	2340	40-02-36	0.0	0.00	24.1/80.5
CP	NJ	BPCT-840104KL	I	335	75-14-33		24.10	CLEAR
WGTW	BURLINGTON		48(-)	5000	40-02-49	55.8	0.73	24.1/80.5
APP	NJ	BPCT-950706KF	I	364	75-14-08		23.37	CLEAR
WGCBTV	RED LION		49(+)	617	39-54-18	262.8	115.58	24.1/80.5
LIC	PA	BLCT-790419KG	I	177	76-35-00		35.08	CLEAR

DTV to NTSC Separation Study - MSTV Allotment Table

Job Title :WGTW

Zone : 2

Channel 46 (662-668 MHz)

Separation Buffer 32 km

FCC TV DB Date : 12/05/97

Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
WNJN	MONTCLAIR		*50(+)	2090	40-51-53	43.6	127.00	24.1/80.5
LIC	NJ	BLET-860805KG	I	243	74-12-03		46.50	CLEAR
WWACTV	ATLANTIC CITY		53(+)	5000 DA	39-33-19	141.9	68.87	24.1/80.5
APP	NJ	BPCT-960508KH	I	132	74-44-47		-11.63	SHORT
WWACTV	ATLANTIC CITY		53(+)	12.3 DA	39-22-51	137.2	100.11	24.1/80.5
LIC	NJ	BLCT-880315KI	I	85	74-27-03		19.61	CLEAR
WBPHTV	BETHLEHEM		60(-)	2950 DA	40-33-54	343.9	60.33	24.1/80.5
CP	PA	BPCT-960131KF	I	284	75-26-26		-20.17	SHORT
WBPHTV	BETHLEHEM		60(-)	12.0	40-33-54	343.9	60.34	24.1/80.5
LIC	PA	BLCT-960129KF	I	225	75-26-27		-20.16	SHORT
WTGITV	WILMINGTON		61(o)	3020	39-41-43	187.1	38.95	24.1/80.5
LIC	DE	BLCT-860717KH	I	292	75-17-55		-14.85	SHORT

** End of TV Separation Study for Channel 46 **

DTV to DTV Separation Study - MSTV Allotment Table

Job Title :WGTW
Zone : 2
Channel 46 (662-668 MHz)

Separation Buffer 32 km
MSTV DB Date: 12-01-97
Coordinates : 40-02-36 75-14-33

Call Status	City St	FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bear. True	Dist. (km)	Req. (km)
DWGTW	BURLINGTON		46	60.7	40-2 -36	0.0	0.00	
DTVALT	NJ		I	339	75-14-33			
DWVVI	MANASSAS		46	67.9	38-47-16	232.8	227.50	196.3
DTVALT	VA		I	170	77-19-49		31.20	CLEAR
DWGCB	RED LION		47	50.0	39-54-18	262.8	115.57	32.2/88.5
DTVALT	PA		I	180	76-35-0		27.07	CLEAR

** End of DTV Separation Study for Channel 46 **